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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

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AUSIC			ATION DEDODE			
INTERNAT	IONAL PRELIMINA		ATION REPORT			
	(PCT Article 36					
Applicant's or agent's file reference VCstsF004/79	FOR FURTHER ACTI	ANT	fication of Transmittal of Internation Yexamination Report (Form PCT/IPEA/4)			
International application No. PCT/FR2003/003154	International filing date (a 24 octobre 2003 (2	-	Priority date (day/month/year) 30 octobre 2002 (30.10.2002)			
International Patent Classification (IPC) or C07K 14/20	<u></u>		30 0010010 2002 (30.10.2002)			
Applicant	VIRBA					
This international preliminary ex Authority and is transmitted to the This REPORT consists of a total of	applicant according to Artic	e 36.	s International Preliminary Examining sheet.			
been amended and are the (see Rule 70.16 and Section	panied by ANNEXES, i.e., she basis for this report and/or ston 607 of the Administrative a total of she	neets containing instructions under	ption, claims and/or drawings which have rectifications made before this Authority r the PCT).			
3. This report contains indications re	lating to the following items:					
I Basis of the repo	Basis of the report					
II Priority	II Priority					
III Non-establishme	III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability					
IV Lack of unity of						
V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement						
VI Certain documents cited						
VII Certain defects in the international application						
VIII Certain observat	tions on the international app	ication				
Date of submission of the demand		ate of completion	of this report			
03 mai 2004 (03.05.2004)		_	February 2005 (18.02.2005)			
05 mai 2007 (05.05						
Name and mailing address of the IPEA/E	P A	uthorized officer				
		elephone No.				



INTERNATIONAL PRELIMINARY EXAMINATION REPORT

PCT/FR2003/003154

I. Basis of the I. This report under Article	has been drawn o	on the basis of (Replacement shee in this report as "originally filed"	its which have been furnished to the receiving Office in response to an invitation and are not annexed to the report since they do not contain amendments.):
	the international	application as originally filed.	
\boxtimes	the description,	pages1-45	, as originally filed,
2_3		pages	_, filed with the demand,
		pages	, filed with the letter of,
		pages	, filed with the letter of
\square	the claims,	Nos1-25	, as originally filed,
			, as amended under Article 19,
		Nos	
			, filed with the letter of,
			, filed with the letter of
\boxtimes	the drawings,	sheets/fig 1/13-13/13	, as originally filed,
	•	sheets/fig	, filed with the demand,
		sheets/fig	, filed with the letter of,
		sheets/fig	, filed with the letter of
	the description, the claims, the drawings,	Nossheets/fig	-
to g	report has been en beyond the disconding of the	losure as filed, as indicated in t	amendments had not been made, since they have been considered the Supplemental Box (Rule 70.2(c)).

INTERNATIONAL PRESAMINARY EXAMINATION REPORT

Internal application No.
PCT/FR 03/03154

 Reasoned statement under Article 3 citations and explanations supporting 		, inventive step or industrial app	licability;
. Statement			
Novelty (N)	Claims	1-5	YES
	Claims	6-25	NO
Inventive step (IS)	Claims		YES
	Claims	1-25	NO NO
Industrial applicability (IA)	Claims	1-25	YES
	Claims		NO

- 2. Citations and explanations
 - 1. Reference is made to the following documents:

D1: WO 01/59123 A (BRANGER CHRISTINE; ENVT TOULOUSE (FR); VIRBAC (FR); ANDRE FONTAINE) 16 August 2001 (2001-08-16)

D2: WO 99/42478 A (UNIV CALIFORNIA) 26 August 1999 (1999-08-26)

D3: WO 96/36355 A (UNIV CALIFORNIA) 21 November 1996 (1996-11-21)

2. The present application does not meet the requirements of PCT Article 33(1), since the subject matter of claims 1-25 does not comply with the criterion of novelty (PCT Article 33(2)).

Document D1 describes the leptospire PPL protein, fragments and variants of said protein and immunogenic peptides derived therefrom (alone or in larger molecules or bound to carriers), capable of inducing effective immune protection against one or more pathogenic leptospire serovars (pages 6 and 7, claims). D1 also describes the 6E5A4F2 antibody,

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used for passive immunisation (page 39; claims), that recognises the peptides of SEQ ID No 1 according to the present application (cf. page 17 of the present application).

Therefore, document D1 anticipates all the features of the subject matter of claim 6, which is directed to a protein consisting of a peptide of SEQ ID No 1 coupled to a carrier protein. Contrary to the applicant's arguments, the feature "coupled to a carrier protein" does not establish the novelty of the subject matter of claim 6 over the proteins known from D1, including SEQ ID No 1.

3. The present application does not meet the requirements of PCT Article 33(1), since the subject matter of claims 1-5 does not involve an inventive step (PCT Article 33(3)).

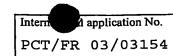
The subject matter of claims 1-5 relates to peptides derived from the leptospire PPL protein and comprising 15 to 100 amino acids.

The problem that the present invention is intended to solve can therefore be considered to be that of providing alternative peptides derived from PPL, capable of inducing protection against leptospirae.

The solution proposed in claims 1-5 of the present application is not considered inventive (PCT Article 33(3)) for the following reasons:

The subject matter of the claims of the present application includes a plurality of peptides that have not been shown and do not credibly appear to

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provide a solution to said problem, which is a precondition for recognising an inventive step.

Moreover, starting with D1, a person skilled in the art was aware of the immunogenic property of the whole PPL protein and would have been led to develop short immunogenic PPL fragments. In addition, an antibody against a PPL epitope, capable of inducing passive immunisation and of being used to select immunogenic fragments, was available to such a person, who would therefore have solved the problem and arrived at the claimed solution without an inventive step being involved.

The applicant mentions surprising effects of the peptide according to the invention in order to justify an inventive step. However, these surprising effects, insofar as they can be supported by comparative tests, only appear to concern the peptide of SEQ ID No 1, whereas the extent of protection of claims 1-5 is much wider.